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AT&T CORP. P.O. BOX 4110 MIDDLETOWN, NJ 07748			SCHEIBEL, ROBERT C	
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/703,699	Applicant(s) DECALUWE ET AL.	
	Examiner Robert C. Scheibel	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see section I on pages 7-9, filed 1/6/2005, with respect to the rejection of claims 1-2, and 4 under 35 U.S.C. 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of U.S. Patent 6,549,516 to Albert et al. Applicant traversed the rejection of the previous office action as Lockhart does not explicitly disclose all of the newly amended limitations. However, Lockhart clearly discloses much of claim 1 as indicated in detail below. Lockhart is clearly maintaining a count of packets from a particular source and making a decision to discard packets from this source based on the count value. Lockhart doesn't expressly disclose the limitations regarding sending a message to a second IP data switching system which is not the source system. However, Albert clearly discloses this limitation as stated in detail in the rejection under 35 U.S.C. 103(a) below.
2. Applicant's arguments, see section I on pages 7-9, filed 1/6/2005, with respect to the rejection of claim 5 under 35 U.S.C. 102(b) have been fully considered and are persuasive. The rejection of claim 5 under 35 U.S.C. 102(b) has been withdrawn.
3. Applicant's arguments, see section I on pages 7-9, filed 1/6/2005, with respect to the rejection of claim 5 under 35 U.S.C. 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of U.S. Patent 6,549,516 to Albert et al. Applicant traversed the rejection of the previous office action as Nagami does not explicitly disclose all of the newly amended limitations. However, Nagami clearly discloses much of claim 5 as indicated

Art Unit: 2666

in detail below. Nagami is clearly maintaining a count of packets to a particular destination and making a decision to discard packets from this source based on the count value. Nagami doesn't expressly disclose the limitations regarding sending a message to a second IP data switching system which is not the source system. However, Albert clearly discloses this limitation as stated in detail in the rejection under 35 U.S.C. 103(a) below.

4. Applicant's arguments, see section I on pages 7-9, filed 1/6/2005, with respect to the rejections of claims 3 and 5-8 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new grounds of rejection is made in view of U.S. Patent 6,549,516 to Albert et al. Applicant traversed the rejection of the previous office action as the prior art relied upon in these rejections does not explicitly disclose all of the newly amended limitations. However, Albert clearly discloses the missing limitation as stated in detail in the rejection under 35 U.S.C. 103(a) below.

Claim Objections

5. Claim 5 is objected to because of the following informalities: in line 9, in the phrase "storing said count of IP data, packets", the comma should be removed. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Art Unit: 2666

7. Claim 17 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 17 recites the limitation "said data traffic rate" in line 2. There is insufficient antecedent basis for this limitation in the claim. For the purposes of the art rejection below, examiner has assumed that this phrase is intended to be "said time-based data traffic measure".

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 1-2, 4, 9, and 11-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,035 to Lockhart et al in view of U.S. Patent 6,549,516 to Albert et al.

Regarding claims **1 and 9**, Lockhart discloses a method in an Internet Protocol (IP) data network comprised of a plurality of interconnected IP data switching systems, comprised of: receiving at a first IP data switching system a plurality of IP data packets (the packets received at the input buffer 28 of Figure 3 and described from line 66 of column 2 through line 2 of column 3); tabulating at said first IP data switching system at least the number of IP data packets received from a particular IP source address during a first time interval, thereby forming a count of IP data packets from a particular source (step 60 in Figure 4); storing said count of IP data packets in a memory device for subsequent processing (inherent as the recent packet count is used at a later time (e.g. step 64)); determining that a time-based data traffic measure from said particular IP source exceeds a predetermined threshold (step 64; this is clearly a time-based measure as indicated by “recent packet count”). Lockhart also discloses making a decision to discard packets from a particular source when the recent packet count exceeds a threshold.

Lockhart does not disclose expressly the limitation of sending a message to a second system indicating the behavior the second system should take regarding the packets from the source address. Albert discloses a system whereby a network service appliance (see 130 in figure 1) is separated into a number of distributed elements (231-2 and 241-2 of figure 2). Element 130 of figure 1 of Albert is clearly analogous to the data packet gate 20 of Lockhart. Albert also clearly discloses the limitation of sending a message from a first IP data switching system (service manager 241) to a second IP data switching system (forwarding agent 231). Note that although not necessary, the service manager may be an IP data switching system as indicated by Albert in lines 53-56 of column 9.

Lockhart and Albert are analogous art because they are from the same field of endeavor of specialized services in IP data networks such as packet filtering. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart by splitting the data packet gate into multiple distributed elements. The motivation for doing so would have been to provide better scalability as indicated by Albert in numerous locations such as lines 5-12 of column 3. Therefore, it would have been obvious to combine Albert with Lockhart for the benefit of increased scalability to obtain the invention as specified in claim 1.

Regarding claim 2, Lockhart discloses the steps of: reading said count of IP data packets from said memory device (inherent in step 64 of Figure 4; the recent packet count must be read before it can be evaluated); selectively discarding IP data packets received at said first IP data switching system that originated from said particular source (steps 64 and 66 of Figure 4).

Regarding claim 4, Lockhart discloses the limitation that said step of selectively discarding IP data packets includes the step of denying reception of IP data packets from a router based upon a source address in IP data packets upon the determination that the count of IP data packets from a source address exceeds a threshold value (steps 64 and 66 of Figure 4).

Regarding claim 11, Lockhart does not disclose the limitation of providing the traffic measure to a user via a user interface. Albert discloses this limitation in the user interface 256 of figure 2B and described in columns 2-4 of column 10. Lockhart and Albert are analogous art because they are from the same field of endeavor of specialized services in IP data networks such as packet filtering. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart to provide a user interface to monitor the data packet gate. The motivation for doing so would have been to provide the customer with greater

Art Unit: 2666

visibility into the behavior of the system. Therefore, it would have been obvious to combine Albert with Lockhart for the benefit of greater visibility to obtain the invention as specified in claim 11.

Regarding claim 12, Lockhart as modified by Albert in the rejection of claim 9 above, discloses the limitation of claim 12 of sending said message to a sub-plurality of IP data switching systems (the forwarding agents 231 and 232).

Regarding claim 13, Lockhart just drops the packet when the threshold is exceeded, thus disclosing the limitation of ignoring incoming packets from a particular source.

Regarding claim 14, Lockhart clearly discloses the threshold as described above. It is inherent that this threshold must be determined, thus disclosing the limitation of claim 14.

Regarding claim 15, Lockhart discloses the limitation of automatically polling a memory for information on the time-based data traffic measure in block 64 of Figure 4.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,035 to Lockhart et al in view of U.S. Patent 6,549,516 to Albert et al and in further view of U.S. Patent 5,491,801 to Jain et al.

Lockhart and Albert disclose all the limitations of parent claim 1 as discussed in the rejection under 35 U.S.C. 103(a) above. Lockhart, as modified, does not disclose expressly the limitation that the switching system is an IP router of claim 3. Jain discloses a method of performing congestion control at a router by monitoring the data transmitted by particular users (see lines 37-38 of column 5 and Figure 4). As Lockhart's invention is intended to prevent excessive traffic from a particular user, this suggests the use of Lockhart's invention in a router.

Art Unit: 2666

Lockhart and Jain are analogous art because they are from the same field of endeavor of controlling excessive traffic by a particular user. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart by implementing his invention as a sub-system in a router, which would be less expensive than creating a stand-alone device to perform the method. Lockhart suggests in lines 22-24 of column 5 that the invention could be implemented as part of another piece of equipment. Therefore, it would have been obvious to combine Jain with Lockhart and Albert for the benefit of reducing costs to obtain the invention as specified in claim 3.

12. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,035 to Lockhart et al in view of U.S. Patent 6,549,516 to Albert et al and in further view of U.S. Patent 6,754,715 to Cannon et al.

Regarding claim 10, the limitation of parent claim 9 is disclosed by the combination of Lockhart and Albert as described in the rejection above. Lockhart, as modified, does not disclose expressly the limitation of overwriting packets in a buffer responsive to said determining step. Cannon discloses this limitation in lines 37-42 of column 7. Lockhart, modified, and Cannon are analogous art because they are from the similar problem solving area of transmitting digital data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart, modified, to discard packets by overwriting older data in the buffer. The motivation for doing so would have been to use allow a smaller buffer to be used as suggested by Cannon in lines 50-55 of column 7. Therefore, it would have been

Art Unit: 2666

obvious to combine Cannon with Lockhart, modified, for the benefit of a smaller buffer size to obtain the invention as specified in claim 10.

13. Claims **5-6 and 17-20** are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,035 to Lockhart et al in view of U.S. Patent 5,706,279 to Teraslinna and in further view of U.S. Patent 6,549,516 to Albert et al.

Regarding claim **5**, Lockhart discloses the steps of sending a plurality of IP data packets from a first IP data switching system to a second IP data switching system (see figure 2; the first switching system is the data packet gate 20 and the second switching system is one of the network elements comprising the radio network 16); tabulating at said first IP data switching system at least the number of IP data packets sent to a particular IP destination address during a first time interval, thereby forming a count of IP data packets sent to a particular IP destination address (step 60 in Figure 4; however, this is a count of packets from the source address); storing said count of IP data packets sent to a particular IP destination address in a memory device for subsequent processing (inherent as the recent packet count is used at a later time); determining that a time-based data traffic measure from said particular IP source exceeds a predetermined threshold (step 64; this is clearly a time-based measure as indicated by “recent packet count”). Lockhart also discloses making a decision to discard packets from a particular source when the recent packet count exceeds a threshold.

Lockhart does not disclose expressly the limitation that the count value is maintained at the first switching element and that it is a count of packets associated with a given destination. Lockhart also does not disclose expressly the limitation of sending a message to a second system

Art Unit: 2666

indicating the behavior the second system should take regarding the packets from the source address. Tersalinna discloses a method whereby network congestion is managed by monitoring the bandwidth usage from or to a particular endpoint as opposed to monitoring each flow (source-destination pair) individually (see abstract and columns 1 and 2). Specifically, in figures 11 and 12, Tersalinna discloses a method of inhibiting the packet flow based on the traffic destined to a particular endpoint. Lockhart and Tersalinna are analogous art because they are from the same field of endeavor of congestion control. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart to monitor packets based on the destination address of packets (and similarly inhibit packets when necessary) in addition to monitoring based on the source address. The motivation for doing so would have been to avoid wasting network resources by controlling the flow of packets earlier in the network. As suggested by Tersalinna in lines 26-28 of column 15, this will avoid having the radio network 16 discard the packets.

Lockhart, as modified by Teraslinna, does not disclose expressly the limitation of sending a message to a second system indicating the behavior the second system should take regarding the packets from the source address. Albert discloses a system whereby a network service appliance (see 130 in figure 1) is separated into a number of distributed elements (231-2 and 241-2 of figure 2). Element 130 of figure 1 of Albert is clearly analogous to the data packet gate 20 of Lockhart, as modified. Albert also clearly discloses the limitation of sending a message from a first IP data switching system (service manager 241) to a second IP data switching system (forwarding agent 231). Note that although not necessary, the service manager may be an IP data switching system as indicated by Albert in lines 53-56 of column 9. Lockhart, as modified,

Art Unit: 2666

and Albert are analogous art because they are from the same field of endeavor of specialized services in IP data networks such as packet filtering. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart, as modified, by splitting the data packet gate into multiple distributed elements. The motivation for doing so would have been to provide better scalability as indicated by Albert in numerous locations such as lines 5-12 of column 3. Therefore, it would have been obvious to combine Albert with Lockhart and Tersalinna, for the benefit of conserving network resources to obtain the invention as specified in claim 5.

Regarding claim 6, with the parent claims addressed by Lockhart as modified above, Lockhart discloses the limitations of d. reading said count of IP data packets from said memory device (inherent in step 64 of Figure 4; the recent packet count must be read before it can be evaluated); e. selectively inhibiting the transmission of IP data packets from said first IP data switching system to said second IP data switching system when the number of IP packets from said first IP data switching system exceeds a predetermined number (steps 64 and 66 of Figure 4).

Regarding claim 17, Lockhart does not disclose the limitation of providing the traffic measure to a user via a user interface. Albert discloses this limitation in the user interface 256 of figure 2B and described in columns 2-4 of column 10. Lockhart and Albert are analogous art because they are from the same field of endeavor of specialized services in IP data networks such as packet filtering. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart to provide a user interface to monitor the data packet gate. The motivation for doing so would have been to provide the customer with greater

Art Unit: 2666

visibility into the behavior of the system. Therefore, it would have been obvious to combine Albert with Lockhart for the benefit of greater visibility to obtain the invention as specified in claim 17.

Regarding claim 18, Lockhart as modified by Albert in the rejection of claim 5 above, discloses the limitation of claim 18 of sending said message to a sub-plurality of IP data switching systems (the forwarding agents 231 and 232).

Regarding claim 19, Lockhart just drops the packet when the threshold is exceeded, thus disclosing the limitation of ignoring incoming packets.

Regarding claim 20, Lockhart clearly discloses the threshold as described above. It is inherent that this threshold must be determined, thus disclosing the limitation of claim 14.

14. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,035 to Lockhart et al in view of U.S. Patent 5,706,279 to Teraslinna in further view of U.S. Patent 6,549,516 to Albert et al and in further view of U.S. Patent 5,491,801 to Jain et al.

Regarding claim 7, Lockhart, as modified, discloses all the limitations of parent claim 5 as discussed in the rejection under 35 U.S.C. 102(e) above. Lockhart does not disclose expressly the limitation that the switching system is an IP router of claim 7. Jain discloses a method of performing congestion control at a router by monitoring the data transmitted by particular users (see lines 37-38 of column 5 and Figure 4). As Lockhart's invention is intended to prevent excessive traffic from a particular user, this suggests the use of Lockhart's invention in a router. Lockhart and Jain are analogous art because they are from the same field of endeavor of controlling excessive traffic by a particular user. At the time of the invention it would have been

Art Unit: 2666

obvious to a person of ordinary skill in the art to modify Lockhart by implementing his invention as a sub-system in a router, which would be less expensive than creating a stand-alone device to perform the method. Lockhart suggests in lines 22-24 of column 5 that the invention could be implemented as part of another piece of equipment. Therefore, it would have been obvious to combine Jain with Lockhart for the benefit of reducing costs to obtain the invention as specified in claim 7.

Regarding claim 8, Lockhart as modified discloses all the limitations of parent claim 6 as discussed above. Lockhart as modified does not disclose expressly the limitation of sending a packet to a specific router to discard messages received from or sent to a specific IP address. Jain describes a conventional method of congestion control from line 57 of column 3 through line 5 of column 4. In this passage, Jain clearly discloses the limitation of sending a message (“source quench” or “choke” packets) to a source router as a means of inhibiting the flow of packets.

Lockhart as modified and Jain are analogous art because they are from the same field of endeavor of packet routing systems. At the time of the invention, it would have been obvious to a person of ordinary skill in the art to modify the Lockhart to send a source quench packet to the source router when the threshold is crossed. The motivation for doing so would have been to stop these packets as close to the source as possible; this will prevent this extra traffic from loading switching/routing devices in the path from the first to the second IP data router switching system. Therefore, it would have been obvious to combine Lockhart as modified with Jain for the purpose of stopping these packets as close to the source as possible to obtain the invention as specified in claim 8.

15. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent 6,189,035 to Lockhart et al in view of U.S. Patent 5,706,279 to Teraslinna and in further view of U.S. Patent 6,549,516 to Albert et al and in further view of U.S. Patent 6,754,715 to Cannon et al.

Regarding claim 16, the limitation of parent claim 5 is disclosed by Lockhart as modified above and as described in the rejection above. Lockhart, as modified, does not disclose expressly the limitation of overwriting packets in a buffer responsive to said determining step. Cannon discloses this limitation in lines 37-42 of column 7. Lockhart, modified, and Cannon are analogous art because they are from the similar problem solving area of transmitting digital data. At the time of the invention it would have been obvious to a person of ordinary skill in the art to modify Lockhart, modified, to discard packets by overwriting older data in the buffer. The motivation for doing so would have been to use allow a smaller buffer to be used as suggested by Cannon in lines 50-55 of column 7. Therefore, it would have been obvious to combine Cannon with Lockhart, modified, for the benefit of a smaller buffer size to obtain the invention as specified in claim 16.

Conclusion

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

Art Unit: 2666

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert C. Scheibel whose telephone number is 571-272-3169. The examiner can normally be reached on Monday and Thursday from 6:30-5:00 Eastern Time.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema S. Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RC 4-28-05
Robert C. Scheibel
Examiner
Art Unit 2666


